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## Four New Species of *Ribes* (Grossulariaceae), Primarily from the Amotape–Huancabamba Zone in Northern Peru

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**ABSTRACT.** Four new species of *Ribes* L. (Grossulariaceae) are described from Peru, three from the Amotape–Huancabamba Zone and one from the eastern slopes of the Andes in central Peru. *Ribes chachapoyense* Weigend & Breitkopf, *R. tumerec* Weigend & Breitkopf, and *R. huancabambense* Weigend & Breitkopf from the Amotape–Huancabamba Zone represent close allies of Ecuadorian species and underscore both the floristic connections of this region to Ecuador and its high levels of floristic distinctness and endemism. With these three new species, the species total for the Peruvian part of the Amotape–Huancabamba Zone now reaches 10, nearly half the species present in Peru. *Ribes frankei* Weigend & Breitkopf is possibly the most aberrant species of *Ribes*—it is a small, cushion-forming dwarf-shrub to 30 cm tall, with erect inflorescences that are virtually immersed in the leafy cushions. It is the smallest species of *Ribes* known so far and has been collected on vertical rock faces in the high Andes of Pasco in central Peru. The species total for Peruvian *Ribes* now reaches 23, which is nearly twice the number of species known for any other individual South American country, indicating that Peru, and especially the Amotape–Huancabamba Zone, represents the center of diversity of the genus in South America. Three of the newly described species are already at the brink of extinction due to habitat destruction (overgrazing, burning, mining, forest clearing: *R. tumerec*, *R. frankei*, *R. huancabambense*) and have to be considered as Critically Endangered. The fourth species, *R. chachapoyense*, has a slightly wider range and can be considered as only Endangered according to IUCN Red List criteria.

**Key words:** Amotape–Huancabamba Zone, Grossulariaceae, IUCN Red List, Peru, *Ribes*.

The genus *Ribes* L. (Grossulariaceae) comprises nearly 200 hermaphroditic and dioecious species in

currently eight subgenera (Weigend, 2006), occurring mainly in the north-temperate zone (Janczewski, 1907; Weigend, 2003, 2006). Centers of diversity are found in southwestern North America and East Asia (Pojarkova, 1971; Lingdi & Alexander, 2001; Sinters & Soltis, 2003; Schultheis & Donoghue, 2004). Only dioecious *Ribes* subg. *Parilla* Jancz. is present in South America (Janczewski, 1907) and extends into southern Central America with a single species, as has been recently shown (Weigend & Binder, 2002). Two sections are recognized in this subgenus: south-temperate section *Parilla* Jancz. and Andean section *Andina* Jancz. Section *Andina* is widespread from southern Central America to Bolivia and reaches Argentina with a single species (Weigend & Binder, 2001). *Ribes* subg. *Parilla* sect. *Andina* consists of functionally dioecious species, with morphological differentiation between the different sexes not obvious. Female flowers tend to be marginally smaller and have well-developed anthers without, however, producing viable pollen. Conversely, male flowers appear fully bisexual at first glance, but the ovules fail to develop (Janczewski, 1907; Weigend et al., 2002). In the field, fruit formation or lack thereof are the only clear indicators of gender in this group.

Numerous new species of *Ribes* subg. *Parilla* sect. *Andina* have been described in recent years, mainly from Ecuador (Freire-Fierro, 1998, 2002, 2004; Weigend & Binder, 2002), but also from Peru (Weigend et al., 2005b; Weigend, 2006). All of the recently described species of *Ribes* from Peru and some of those from Ecuador were discovered in the Amotape–Huancabamba Zone, an area of extraordinary species richness and high levels of endemism (Duellman, 1979; Berry, 1982; Young & Reynel, 1997; Ayers, 1999; Skrabal et al., 2001; Weigend, 2002, 2004a, b; Weigend et al., 2005a; De Witt Smith & Baum, 2006). Notably, the species described from Peru belong to two species groups previously only

known from Ecuador (or extending farther north from Ecuador). Several species described are closely allied to *R. andicola* Jancz. (ranging north to Colombia and Venezuela), namely *R. sanchezii* Weigend, *R. colandina* Weigend, and *R. contumazensis* Weigend (Weigend et al., 2005b). *Ribes erectum* Freire-Fierro and *R. nanophyllum* Freire-Fierro & Endara have been described relatively recently from Ecuador (Freire-Fierro, 1998, 2002, 2004). The latter two species represent a highly characteristic group within Andean *Ribes*, since they have virtually undivided, evergreen, coriaceous leaves and long, stiffly erect inflorescences. Weigend and Rodríguez (2006) described a third species of this group, *R. amazonicum* Weigend & E. Rodr., from the Amotape–Huancabamba Zone in northern Peru.

Several new collections from this area have been made in recent years. A comparison to both published data (Freire-Fierro, 2004; Weigend et al., 2005b; Weigend & Rodríguez, 2006) and herbarium specimens shows that these collections include four new species of *Ribes* from the Amotape–Huancabamba Zone (Fig. 1), which are described here. The new taxa are clearly differentiated on the basis of leaf and flower morphology and indument. Three of them (*R. huancabambense* Weigend & Breitkopf, *R. chachapoyense* Weigend & Breitkopf, *R. tumerec* Weigend & Breitkopf) are closely allied to three different Ecuadorian species groups (see below).

The fourth species described here comes from the upper eastern slopes of the Andes in the department of Pasco, one of the least known areas of Peru. All roads crossing from the Andes into Amazonia usually follow the deeply cut river valleys, so that the higher regions are virtually inaccessible in most places. *Ribes frankei* Weigend & Breitkopf is easily the most aberrant species of *Ribes* described so far. It is a small, cushion-forming shrublet found in rock faces and thus represents the smallest species known for the genus.

The newly described *Ribes* species bring the species total for the Peruvian part of the Amotape–Huancabamba Zone up to 10 species of 23 species now known for Peru. This means that nearly half the species of the genus are concentrated in this relatively small part of Andean Peru, underscoring the high levels of diversity and endemism found in other studies (Berry, 1982; Ayers, 1999; Skrabal et al., 2001; Weigend, 2002, 2004a, b; Weigend et al., 2005a). The overall species number known from the Amotape–Huancabamba Zone is now higher than the total number of species reported from Ecuador (nine species; Freire-Fierro, 2004), Colombia (seven species; M. Weigend, pers. obs.), or Bolivia (seven species; Weigend & Binder, 2001) and nearly as high as the number reported for Argentina and Chile

together (13 species; Weigend, 2008). Peru has more than twice as many species of *Ribes* overall as any other single South American country. Also, the presence of new species of groups previously known from Ecuador underscores the mixture of North Andean and Central Andean floristic elements in the Amotape–Huancabamba Zone (Weigend, 2002).

#### TAXONOMIC TREATMENT

**1. *Ribes chachapoyense*** Weigend & Breitkopf, sp. nov. TYPE: Peru. Amazonas: Chachapoyas, Leymebamba, path to Laguna de los Cóndores, Pampa Muralla, 3800 m, 17 May 2004, C. Schwarzer 06 (holotype, USM; isotype, B). Figures 1, 2.

Haec species *Ribi hirta* Humb. & Bonpl. ex Roem. & Schult. ut videtur affinis, sed ab eo foliis dissitis multo majoribus lamina manifeste profundeque triloba atque inflorescentia longiore pluriflora distinguitur.

Shrub, erect or lianescent, to 1–3 m tall; branches 3–40 cm, bark brown or red-brown in the first year and covered with scattered stipitate glands, later dark brown or bright gray, largely glabrous and eglandular, weakly exfoliating later. Bud scales (cataphylls) ovate to oblong, apex acuminate, 10–25 × 4–7 mm, numerous sessile to minute stipitate glands especially in distal portion, puberulent, pubescent stipitate glands present on margin. Leaves probably deciduous, pale to dark green; petiole 1–5 cm, ca. 1/3 to equaling the lamina length, slightly dilated in stipular region, densely short pubescent, with pubescent stipitate glands (to 5 mm); lamina triangular-ovate, with largest leaves to 80 × 90 mm, lobed with 1 lobe on each side, sometimes obscurely 5-lobed, median lobe to 20–55 × 15–50 mm, margins serrate, with scattered stipitate glands, leaf base cordate, both surfaces subglabrous, pubescent, or rarely with scattered stipitate glands ca. 1 mm long. Plants dioecious; inflorescences terminal racemes, erect, later pendulous, with (15 to)40(to 70) flowers, to 25 cm long in flower; peduncles 0.5–4 cm, densely pubescent to 1 mm, scattered to numerous stipitate glands with or without white hairs on stem; pedicels 4–5(–8) mm; bracts ovate to oblong, apex acuminate, 4–10 × 1.5–3 mm, pale orange to reddish orange with darker center, numerous long stipitate glands on margin, often pubescent; bracteoles similar, 2–3 × 1–1.5 mm. Flowers narrowly campanulate, 6–7 × 4–6 mm, red to purple; hypanthium 4–5 mm, base (ovarian portion) with numerous stipitate glands, glabrous to densely pubescent; calyx lobes 2–2.5 mm, eglandular or with scattered stipitate glands; petals obovate, apex acuminate, ca. 1 × 1 mm, glabrous; filaments and anthers each ca. 1.5 mm. Fruit a red berry, glabrous or covered with

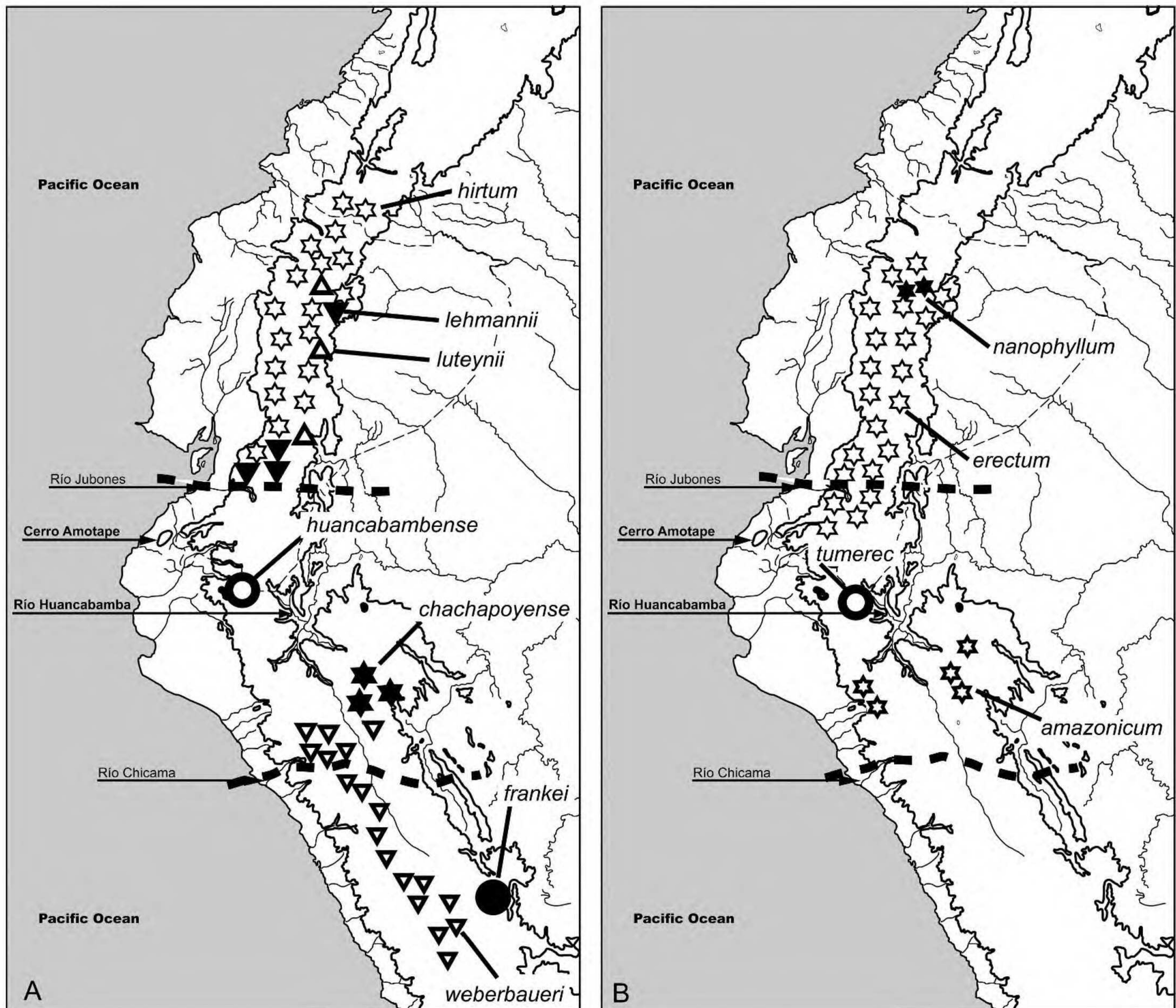


Figure 1. Distribution maps of the *Ribes hirtum* and *R. erectum* groups in southern Colombia, Ecuador, and northern Peru (Freire-Fierro, 2004; Weigend & Rodríguez, 2006; Weigend, pers. obs.). —A. *Ribes hirtum* group. —B. *Ribes erectum* group; the westernmost collections of *R. amazonicum* in Peru are new (Cajamarca, Santa Cruz, Pulán, I. Vela & L. Dávila-E 603 [CPUN]; Lambayeque, Ferreñafe, Ullurpampa, M. Weigend et al. 8554 [B, USM]).

numerous stipitate glands, or pubescent, seeds ca.  $2 \times 1.5$  mm.

*Distribution and habitat.* *Ribes chachapoyense* is apparently relatively abundant in a rather narrow region of the neighboring provinces of Chachapoyas and Bolívar in Peru. It is found at the upper margins of the cloud forest belt, essentially in subpáramo vegetation. The collections are from a relatively narrow region—the species is restricted to the upper eastern slopes of the Cordillera Central (the easternmost mountain range in this area) and is replaced by *R. weberbaueri* Jancz. and *R. colandina* on the western slope of this mountain range. It has been collected at elevations of 3250–3600 m.

*IUCN Red List category.* *Ribes chachapoyense* is the only relatively abundant species of the four new

species described here. It is assessed here as Endangered (EN B1ab; C1) according to IUCN Red List criteria (IUCN, 2001) because only four populations are known and these contain well below 50 mature individuals (< 2500 individuals total). Moreover, the total area of occupancy is less than 500 km<sup>2</sup>, severely fragmented, and subject to massive habitat destruction (overgrazing and burning).

*Phenology.* There are flowering collections from May, June, August, and November, and it can be assumed that the species flowers and fruits more or less throughout the year.

*Etymology.* The specific epithet refers to the distribution of the new species in the Peruvian province of Chachapoyas and neighboring areas.

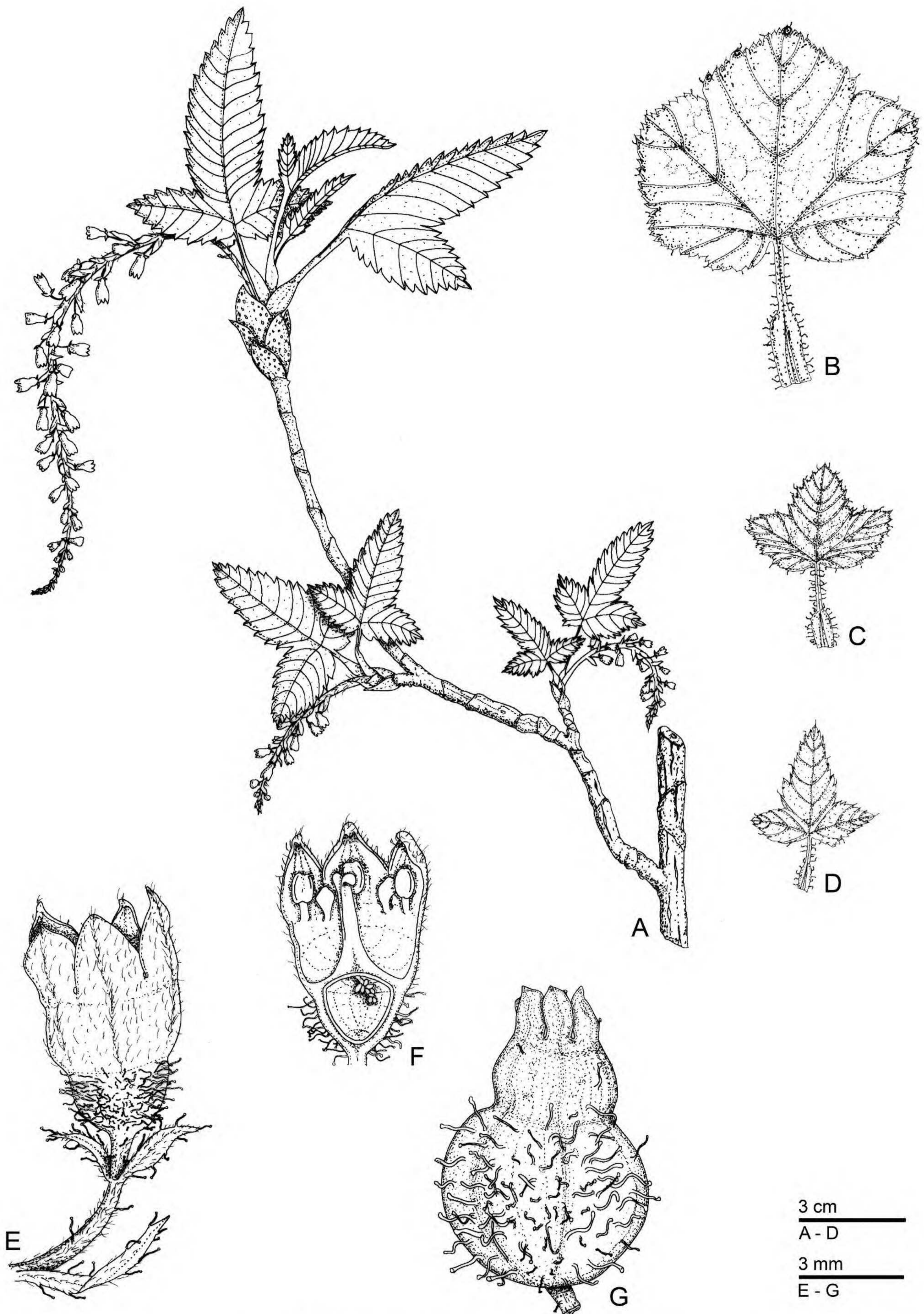


Figure 2. *Ribes chachapoyense* Weigend & Breitkopf. —A. Flowering branch. —B–D. Leaves. —E, F. Flowers. —G. Fruit. Drawings by H. Breitkopf. A, drawn from the paratype Sanchez *et al.* 11186 (CPUN); B, G, from the paratype Henning & Schneider 293 (B); C, from the paratype Quipuscoa *et al.* 1203 (HUT); D–F, from the paratype Hofreiter 2004/1 (B).

*Relationships.* The new species is evidently allied to Ecuadorian *Ribes hirtum* Humb. & Bonpl. ex Roem. & Schult., but differs in the more widely spaced and much larger leaves (at least twice as large

as *R. hirtum*), the lamina that is clearly and deeply 3-lobed (vs. obscurely lobed to deeply lobulate-serrate in *R. hirtum*), and the inflorescences that are longer and have more flowers. *Ribes chachapoyense* is

morphologically intermediate between the *R. macrobotrys* Ruiz & Pav. group, which has larger, deeply lobed leaves, very long inflorescences (to 35 cm long), and an often lianescent habit (Weigend & Binder, 2001), and the *R. hirtum* group, with small, weakly lobed leaves, shorter inflorescences (usually less than 15 cm long), and consisting of usually stiffly erect, sparsely branched shrublets. *Ribes weberbaueri*, a species with very similar flowers that also belongs in the *R. hirtum* group, replaces *R. chachapoyense* to the southwest in Cajamarca, La Libertad, and Ancash, but differs in a very densely branched habit, much smaller (ca. 3–5 cm long) and deeply dissected leaves, and much shorter inflorescences (< 5 cm long).

*Paratypes.* PERU. **Amazonas:** Way from Leymebamba to Laguna de los Cóndores, 06°49.25'S, 077°44'W, 25 May 2001, T. Henning & C. Schneider 293 (B, HUT, M, USM); Leymebamba, ruta Laguna de los Cóndores, entre Pampa Hermosa y La Muralla, 06°49.05'S, 077°44.08'W, 3250–3500 m, 15 Aug. 1998, V. Quipuscoa S., A. Sagástegui A., S. Leiva G. & M. Bejarano C. 1203 (HUT). **La Libertad:** Bolívar, E of Bolívar, upper slopes of E side of cordillera toward Amazonia, Sep. 2004, Hofreiter 2004/1 (B, M, USM); Ascenso a Nevado de Cajamarquilla, 07°08'S, W 077°42'W, 10 Nov. 2001, I. Sánchez V., M. Dillon & G. Iberico 11186 (B, CPUN).

## 2. *Ribes frankei* Weigend & Breitkopf, sp. nov.

**TYPE:** Peru. Pasco: Huachón, Nevado de Huagaruncho, 4500 m, 23 Nov. 1999, T. Hofreiter & T. Franke 1/107 (holotype, USM; isotypes, B, HUT). Figures 1, 3.

Haec species quoad foliorum florumque formam *Ribes luteynii* Weigand simillima, sed ab eo inflorescentia brevior erecta, ab omnibus congeneris habitu suffruticoso pulviniformi perclare distinguitur.

Dwarf shrub 0.1–0.3 m tall, densely branching; bark red-brown, glandular by numerous minute stipitate glands, scattered white hairs < 0.5 mm; bud scales unknown. Leaves coriaceous, dark green; petiole 7–8 mm, ca. 1/3 to equaling the lamina length; stipular region dilated, 3–4 mm wide, pubescent from white hairs < 1 mm, densely set with numerous minute stipitate glands on the adaxial surface and long stipitate glands with hairs on petiole on the margin, largest stipitate glands branching, with 2 to 5 glandular tips; lamina obovate to elliptic, margins reflexed, (6–)14(–17) × (3–)6(–8) mm on flowering shoots, to 20 × 15 mm on vegetative shoots, with 1 small lateral lobe on each side, median lobe up to 4 × 4 mm, with 2 to 4 serrations, incisions between lobes 1–1.5 mm deep, margins sparsely serrate only in the distal half of lamina, leaf base cuneate, rarely obtuse, adaxial surface shortly pubescent, < 0.5 mm, with

numerous minute stipitate glands, abaxial surface pubescent with white hairs to 1 mm, with numerous minute stipitate glands. Plants dioecious; inflorescences terminal racemes, subsessile, erect, very dense, ca. 3 cm long, with (5 to)10(to 15) flowers; pedicels 1–2 mm; bracts ovate to oblong, apex acute, 6–9 × 2–3 mm; bracteoles similar, ca. 2 × 0.8 mm, bracts and bracteoles bright green, with numerous long stipitate glands on margins and scattered minute stipitate glands on the abaxial surface. Flowers campanulate, 9–11 × 7–9 mm, wine-red on the outside, orange on the inside (senescent flowers yellow); hypanthium 6–7 mm, pubescent, with scattered long stipitate glands; ovarian portion 1/2 as long as the hypanthium, lobes ca. 2.5 × 3 mm; petals ca. 2.5 × 0.8 mm, apex obtuse, style apex bifid; filaments 2–2.5 mm, anthers ca. 1 mm. Fruit unknown.

*Distribution and habitat.* *Ribes frankei* was found on near-vertical rock in crevices and on rock ledges. The new species is currently known only from a single locality in Huachón, Peru, but the entire region is still floristically very poorly known.

*IUCN Red List category.* *Ribes frankei* is known only from the type collection. The high-Andean habitat where it grows is frequently burnt for improving the pastures and the area is overgrazed, with *Ribes* subject to heavy browsing by cattle. While the existence of additional populations cannot be ruled out, at present it has to be considered as Critically Endangered (CR B1ab) according to IUCN Red List criteria (extent of occurrence < 10 km<sup>2</sup>, known from a single location, population size < 250 individuals; IUCN, 2001).

*Phenology.* The type collection is from October, which is the peak flowering season for Peruvian *Ribes* and probably the typical flowering time of this species. Fruits likely mature from January to March.

*Etymology.* The specific epithet honors Thassilo Franke (Munich, 1972–), who collected the type and has contributed many interesting collections to our research.

*Relationships.* *Ribes frankei* is easily the most distinctive species of *Ribes*, and its cushion-forming habit makes it unique in the genus. In flower and leaf morphology it shows some resemblance to the group around *R. hirtum* (see above under *R. chachapoyense*), but it is readily differentiated from these in its cushion-forming habit and short, erect inflorescences. Flower and leaf morphology most closely resembles *R. luteynii* Weigend, which differs clearly in habit (sparsely branched shrub to 1.5 m tall), inflorescence

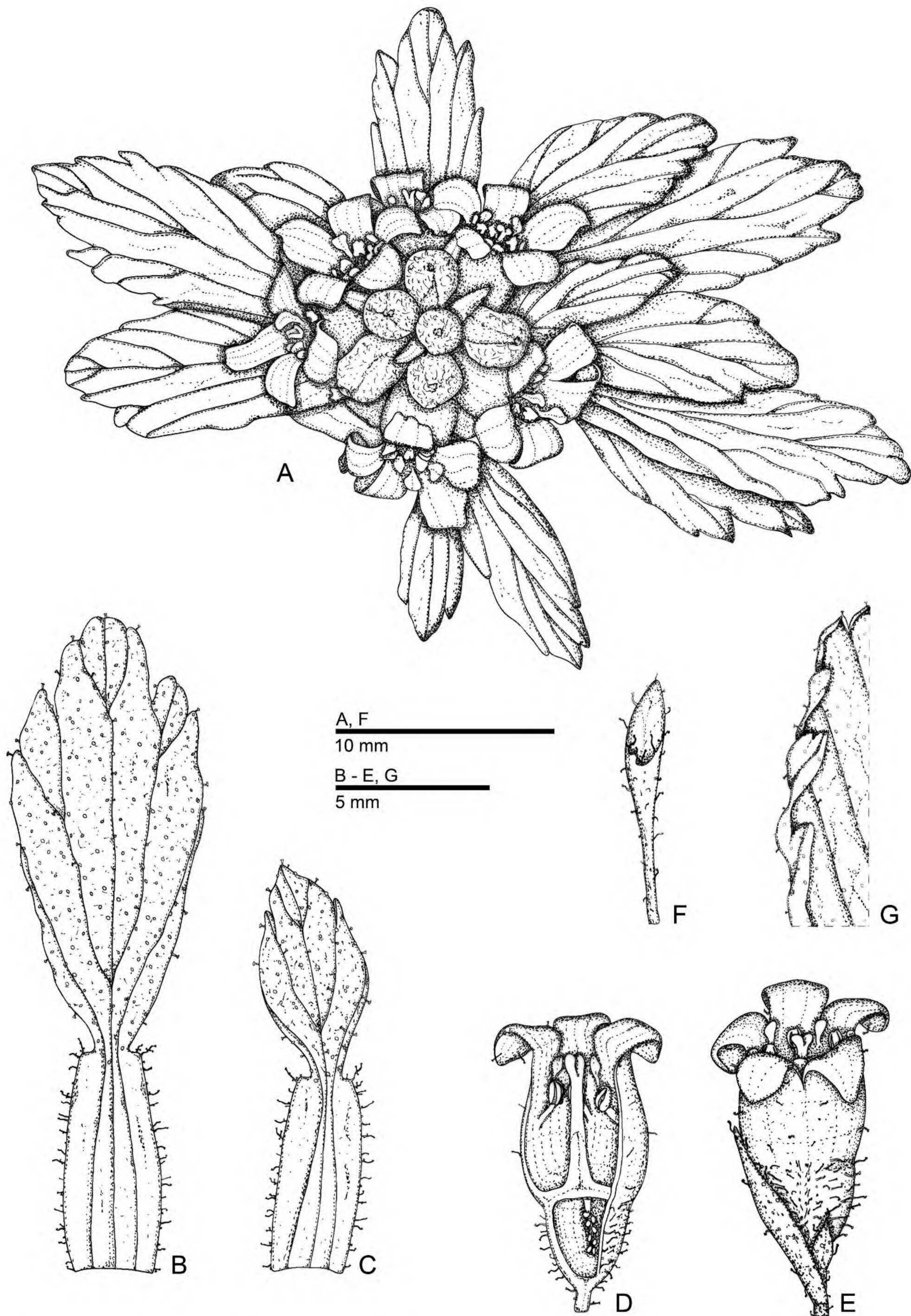


Figure 3. *Ribes frankei* Weigend & Breitkopf. —A. Habit (top view). —B. Aberrant bracteole. —C. Leaf margin, abaxial side. —D, E. Flowers. —F, G. Leaves. Drawings by H. Breitkopf; drawn from the isotype *Hofreiter & Franke 1/107* (B).

size (up to 8.5 cm), and inflorescence orientation (pendulous). Other species of Peruvian *Ribes* are sometimes found growing in vertical rock faces (*R. cuneifolium* Ruiz & Pav., *R. brachybotrys* (Wedd.)

Jancz.), but these are normally developed shrubs. *Ribes frankei* is the only cushion-forming species specifically adapted to this habitat by the formation of tough, flat mats.

**3. *Ribes huancabambense*** Weigend & Breitkopf, sp. nov. TYPE: Peru. Piura: Huancabamba, Carmen de la Frontera, localidad de Rosarios Bajos, 3280–3555 m, 27 July 2006, A. Cano, W. Mendoza & N. Valencia 16776 (holotype, USM; isotype, B). Figures 1, 4.

Haec species quoad habitum unicaulem supra tantum ramosum, ramos foliis coriaceis ad extremum aggregatis plerumque in racemum densum primo erectum deinde pendulum desinentes atque florem extus rubrum intus aurantiacum *Ribi hirtum* Humb. & Bonpl. ex Roem. & Schult., *R. luteynii* Weigand et *R. lehmannii* Jancz. similis, sed a his duobus foliis minoribus suborbicularibus profunde trilobis, ab illo foliis supra glabratis subtus secus venas tantum parce glandularibus pubescentibusque, inflorescentia multo breviora pauciflora atque floribus minoribus distinguitur.

Shrub or treelet, stiffly erect, 0.6–1 m tall, sparsely branched only above, flowering branches 4–20 cm long; bark brown in the first year, densely pubescent with short trichomes, glandular with numerous stipitate glands, later dark brown or bright gray, weakly exfoliating. Bud scales (= cataphylls) ovate, apex acuminate, 3.5–5 × 2.5–3 mm, numerous white hairs and stipitate glands with hairs on stem present on margin and distal portion. Leaves probably evergreen, coriaceous, dark green; petiole 4–6 mm, ca. 1/3 to 1/2 of lamina length, stipular region ca. 3–4 × 2–2.5 mm, apices of stipules barely differentiated, numerous stipitate glands with hairs on stem, densely pubescent with trichomes to 1 mm long; lamina triangular-ovate, (6–)10(–12) × (6–)10(–15) mm, trilobed with 1 lobe on each side, rarely obscurely 5-lobed, median lobe to 6 × 8 mm, margins sparsely serrate, with 2 to 6 serrations per lobe, with scattered stipitate glands especially on the tips of the lobules, entire, leaf base subcordate to subcuneate, adaxial surface glabrous, but with scattered stipitate glands near margin, abaxial surface subglabrous, very few white hairs on the pilose margin, scattered stipitate glands especially on veins. Plants dioecious; inflorescences terminal, erect, later pendent racemes to 4 cm, with 7 to 10(to 15) flowers; peduncles 9–15 mm, densely pubescent with white hairs to 1 mm, with numerous stipitate glands, sometimes with hairs on stem; pedicels 2–3.5 mm; bracts ovate to oblong, apex acuminate, 3–5 × 1.5–2 mm, pale with darker center, numerous long stipitate glands especially on margin and distal 1/3, proximal bracts often with green tips; bracteoles similar, 1–1.5 × 0.5–0.7 mm. Flowers narrowly campanulate, 4–6 × 2.5–4 mm, wine-red on the outside, orange on the inside; hypanthium ca. 4 mm, base (ovarian portion) with numerous stipitate glands, scattered to numerous

white hairs; calyx lobes ca. 1.5–2 mm, with scattered stipitate glands, densely pubescent with white hairs; petals ovate to oblong, apex acuminate to emarginate, mostly obtuse, ca. 1 × 0.5 mm, glabrous, style apically bifid; filaments and anthers each ca. 1.5 mm. Mature fruit unknown.

*Distribution and habitat.* *Ribes huancabambense* is found in more or less open subpáramo vegetation. The new taxon is currently known only from a single locality in Huancabamba, Peru, but the entire region is still very poorly known.

*IUCN Red List category.* *Ribes huancabambense* is known only from the type collection. The subpáramo vegetation is gradually being destroyed by burning, overgrazing, and increasingly aggressive mining operations in the area. Additional populations may be present, but at present the species has to be considered as Critically Endangered (CR B1ab) according to IUCN Red List criteria (extent of occurrence < 10 km<sup>2</sup>, known from a single location, population size < 250 individuals, area subject to dramatic habitat destruction; IUCN, 2001).

*Phenology.* The type collection is from July, but the species possibly flowers and fruits throughout the year in this permanently moist habitat.

*Etymology.* The specific epithet is derived from Huancabamba, the name of the Peruvian province where the type collection came from.

*Relationships.* *Ribes huancabambense* is morphologically close to the Ecuadorian species *R. hirtum*, *R. luteynii*, and *R. lehmannii* Jancz., which it resembles in overall morphology. The four species share a fairly unique habit: they are small, more or less single-stemmed shrublets (treelets) that are branched only above. The coriaceous leaves are tufted at the end of the branches, which typically terminate in a dense, initially erect, later pendulous raceme. The flowers are red on the outside and orange on the inside. The species differ clearly in details of the indument and leaf morphology: *R. huancabambense* has very small, subcircular, deeply 3-lobed leaves and smaller flowers. Conversely, the leaves of *R. luteynii* and *R. lehmannii* are narrowly (ob)ovate and long acuminate, without any clear lateral lobes. *Ribes hirtum* has a similar leaf shape, but the leaves are densely pubescent and glandular on both surfaces, whereas those of *R. huancabambense* are glabrate adaxially and only sparsely glandular and pubescent on the veins abaxially. Also, the inflorescences are much shorter in *R. huancabambense* (< 4 cm vs. up to 15 cm in *R. hirtum*) and there are fewer and smaller flowers in the inflorescence (seven to 15 flowers < 4 mm long



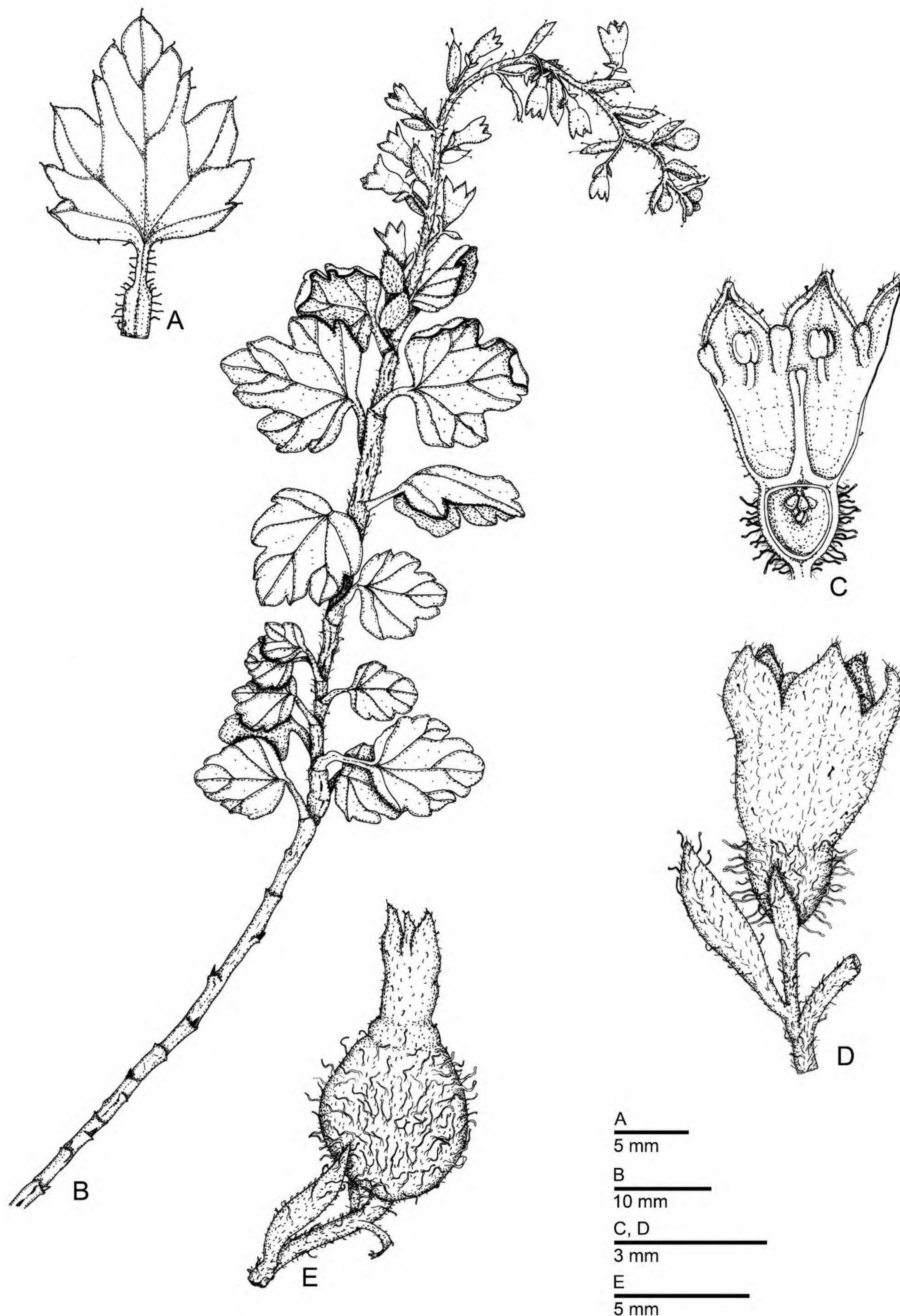


Figure 4. *Ribes huancabambense* Weigend & Breitkopf. —A. Leaf. —B. Flowering branch. —C, D. Flowers. —E. Fruit. Drawings by H. Breitkopf; drawn from the isotype *Cano et al.* 16776 (B).

vs. 25 to 40 flowers ca. 7–8 mm in *R. hirtum*). *Ribes weberbaueri*, from the same species complex, differs from all these species by its deeply and repeatedly dissected leaves.

4. ***Ribes tumerec*** Weigend & Breitkopf, sp. nov.  
TYPE: Peru. Cajamarca: Jaén, Sallique, localidad de Lanchal, La Cocha, 05°40.52'S, 079°14.5'W, 3300 m, 28 June 1998, *C. Diaz*,

*J. Campos, T. Guevara & E. Tineo 9724*  
(holotype, HUT; isotype, B). Figures 1, 5.

Haec species congeneris sempervirentibus inflorescentiis erectis praeditis nuper descriptis (*Ribi erecto* Freire-Fierro, *R. nanophyllo* Freire-Fierro & Endara et *R. amazonico* Weigend & E. Rodr.) ut videtur arcte affinis, sed ab eis caulibus foliis inflorescentia ovario sepalisque densissime stipitato-glandulosis distinguitur.

Shrub erect or subscandent, 1–4 m tall, moderately branching, flowering branches 10–40 cm long; bark brown, glabrous but with numerous stipitate glands, weakly exfoliating later; bud scales (cataphylls) ovate to oblong, apex acuminate, 4–6 × 2–3 mm, numerous stipitate glands on margin, otherwise glabrous. Leaves evergreen, coriaceous, dark green; petiole 10–20 mm, ca. 1/4 to 1/3 of lamina length; stipular region ca. 1/2 of petiole length, 7–9 × 3–4 mm, abruptly dilated, free apices of stipules missing, densely pubescent, with numerous stipitate glands especially on the margin of the stipulate region; lamina triangular-ovate, (25–)30(–40) × (15–)19(–25) mm, trilobed, lateral lobes much smaller than median lobe, median lobe 10–22 × 9–15 mm, margin simply serrate apart from proximal portion (ca. 15% of overall length), base cuneate (ca. 90°), abaxial and adaxial surfaces glabrous, but with scattered stipitate glands, especially on lobules. Plants dioecious; inflorescences terminal racemes, erect, with (20 to)25(to 40) flowers, (10–)15(–20) cm long in flower; peduncles 1.5–2.5 cm, densely pubescent, with numerous stipitate glands; pedicels 2–3 mm; bracts ovate to elliptical, apex acuminate, 5–7 × 1.5–2 mm, pale brown, darker in the middle, with very few short hairs and numerous long stipitate glands on margin; bracteoles similar, 1–2 × 0.4–0.7 mm. Flowers narrowly campanulate, 4–6 × 3–5 mm, wine-red; hypanthium 2.5–4 mm, base (ovarian portion) with numerous stipitate glands and scattered white trichomes; calyx lobes 1.5–2 mm, with numerous stipitate glands and scattered white trichomes abaxially; petals ovate, apex acuminate, 0.7–1 × 0.4–0.6 mm, with a hood-shaped, introrse protuberance in the proximal half, glabrous; stamens with filaments and anthers each ca. 0.7 mm, nectaria large, lining the proximal half of the hypanthium to the level of the insertion of filaments and petals. Fruit a red berry, covered with numerous stipitate glands and scattered white trichomes, calyx remnants ca. 1/3 to 1/2 of entire portion, seeds ca. 2 × 1.5 mm.

*Distribution and habitat.* *Ribes tumerec* is found in the undergrowth of cloud forest remnants. The new species is currently known only from a single locality in Jaén, Peru, but the entire region is still very poorly known.

*IUCN Red List category.* *Ribes tumerec*, like *R. amazonicum*, is a species of the undergrowth of cloud forests and is rapidly eliminated from cleared areas. Its current habitat represents the last stands of moderately well-preserved cloud forests in the area and will likely be destroyed in the near future. The species has to be considered as Critically Endangered (CR A2; B1ab) according to IUCN Red List criteria (IUCN, 2001), because it has likely lost more than 80% of its range in the last three generations due to habitat destruction, its known range is less than 100 km<sup>2</sup>, and it is only known from a single location with a population size of less than 250 individuals.

*Phenology.* The type collection is from June, but the species likely flowers and fruits throughout the year in this permanently moist habitat. This phenology is also known for the closely related *Ribes amazonicum* (Weigend & Rodríguez, 2006).

*Etymology.* The specific epithet is an anagram of the word “erectum,” and *Ribes erectum* is a closely allied Ecuadorian species. The epithet is to be treated as a noun in apposition (McNeill et al., 2006: Art. 23.1).

*Relationships.* *Ribes tumerec* is evidently closely allied to other recently described evergreen species of *Ribes* with erect inflorescences (*R. erectum* and *R. nanophyllum* from Ecuador [Freire Fierro, 1998, 2002, respectively], *R. amazonicum* from Peru [Weigend & Rodríguez, 2006]). However, *R. tumerec* differs from all other species of this group by its very dense cover of stipitate glands on the rachis, ovary, sepals, leaves, and stems. *Ribes erectum* is covered with sessile glands only on the ovary and is otherwise largely eglandular, but is densely covered with simple, white trichomes on the rachis and flower. *Ribes amazonicum*, the only Peruvian species previously known from that group, differs in the possession of very few stipitate glands mixed with numerous simple hairs on the inflorescence, flowers, and fruits. Both *R. amazonicum* and *R. tumerec* differ from the two Ecuadorian species by the possession of triangular-ovate leaves with very well-developed lateral lobes. These lateral leaf lobes are barely differentiated in *R. nanophyllum* and *R. erectum*.

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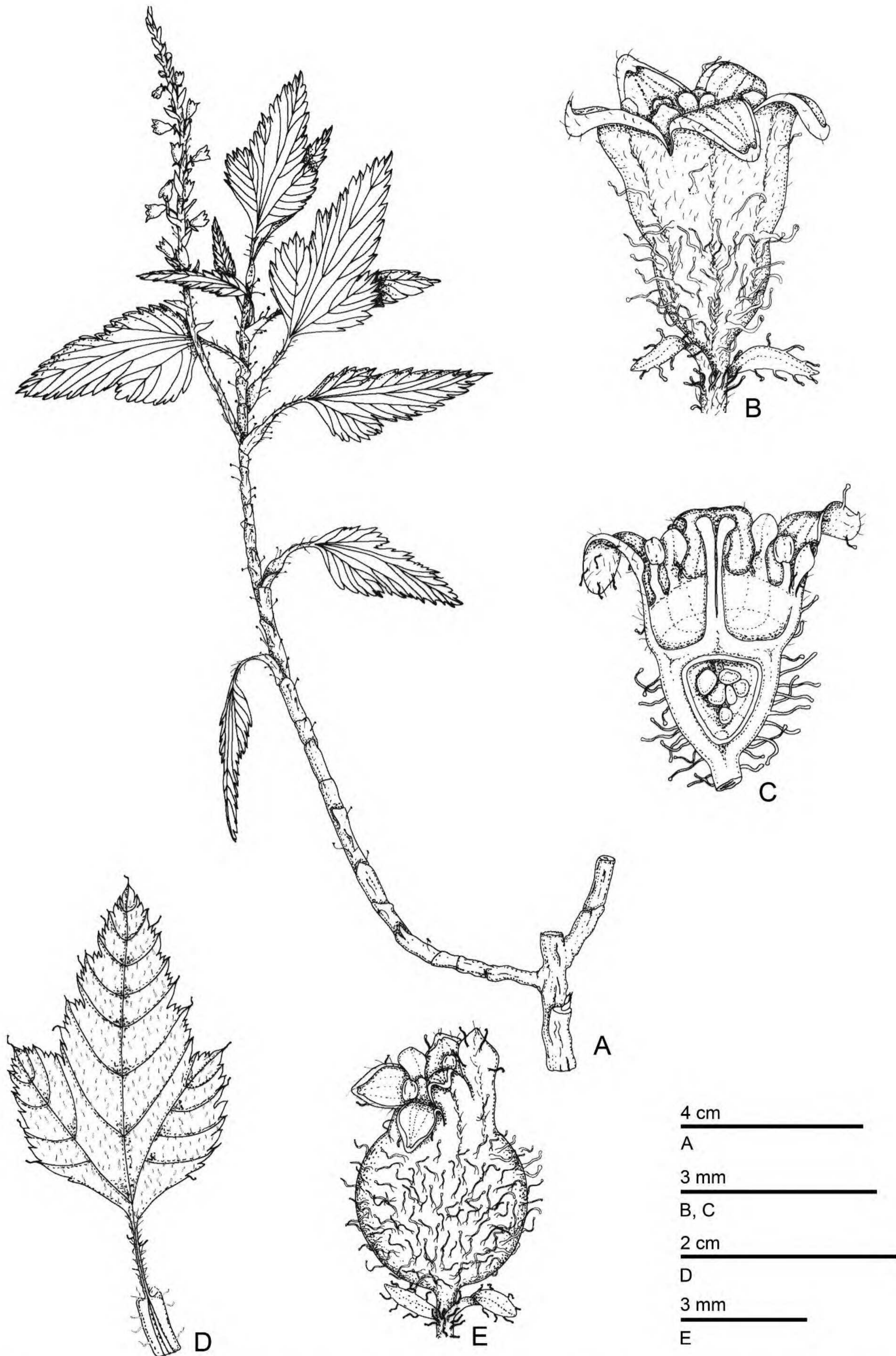


Figure 5. *Ribes tumerec* Weigend & Breitkopf. —A. Flowering branch. —B, C. Flowers. —D. Leaf. —E. Fruit. Drawings by H. Breitkopf; drawn from the isotype *Diaz et al.* 9724 (B).

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